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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,056	06/27/2003	Kazimierz L. Kozyra	884.952US1	7890

7590

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Schwegman, Lundberg, Woessner & Kluth, P.A.
P.O. Box 2938
Minneapolis, MN 55402

EXAMINER

FLANIGAN, ALLEN J

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/608,056

Applicant(s)

KOZYRA ET AL.

Examiner

Allen J. Flanigan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 14, 15, 18, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no explicit antecedent basis for "the longitudinal axis of the heat sink" in claims 12 or 17, nor is the heat sink recited as being of a shape that inherently possesses a longitudinal axis (rod like, cylindrical, etc.).

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ritz.

Ritz shows a heat dissipating finned core with plural helical curved (nonplanar) fins. Regarding claim 2, terms in the claims are given their broadest reasonable definition consistent with the specification¹. It is believed that "rod" in plain, ordinary usage is broad enough to encompass both hollow and solid bars (consider the household curtain rod, for example, which is typically hollow to permit adjustment of length). Clearly this is not inconsistent with the disclosure (page 3 last paragraph).

Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by European Published Patent Application #883,179A2 (hereinafter "EP '179").

See Figs. 3A and the Fig. 15 embodiment of EP '179. The base 2 is readable on the "thermally conductive core", and upper surface of base 2 is

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readable on the claimed "outer surface". Note that when the pin fins 4 employ helical fins taught in Fig. 3A, the upper surface will clearly have a plurality of nonplanar helical fins extending from the outer surface of the core.

Claims 13, 14, 16, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP '179.

The Examiner hereby takes Official Notice of the notorious nature of using fans to force airflow across heat sinks to enhance cooling (note arrows 17 indicating airflow across pin fins 4 of EP '179). In re Malcolm, 54 U.S.P.Q. 235. To use a fan to provide such airflow as illustrated would have been obvious to one of ordinary skill in the art at the time the instant invention was made.

Regarding claim 16, the Examiner previously took Official Notice of the well-known nature of using fan-cooled heat sinks to cool various components, including processors on motherboards, and the applicant has not challenged this finding.

Regarding claim 14, clearly a conventional axial flow fan providing crossflow will have an axis parallel to an axis lying in the plane of base 2 of EP '179 that can read on the claimed "longitudinal axis".

Claims 15, 18, and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

¹ MPEP 2111.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Allison shows a heat dissipator with helical fins. Saunders et al. show helical fins on solid nuclear fuel rods.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (703) 308-1015. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Scherbel can be reached on (703) 308-1272. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Allen J. Flanigan
Primary Examiner
Art Unit 3753

AJF